



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/531,214

09/06/2005

Albrecht Klotz

10191/4248

7857

26646 7590 12/31/2008
KENYON & KENYON LLP
ONE BROADWAY
NEW YORK, NY 10004

EXAMINER

ALSOMIRI, ISAM A

ART UNIT

PAPER NUMBER

3662

MAIL DATE

DELIVERY MODE

12/31/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/531,214	KLOTZ ET AL.	
	Examiner	Art Unit	
	ISAM ALSOMIRI	3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>110408</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uomori et al US 2004/0041997A1 in view of Susumu et al JP10268051 (cited by applicant).

Referring to claim 16, Uomori discloses in figures 1-25 a sensor comprising: light sources (11) situated in the form of a two-dimensional matrix (figure 2) for generating light beams emitted in various directions; means for receiving light beams reflected by objects; and means for evaluating the received light beams according to direction in the sense of a three-dimensional imaging of the objects (see Abstract). Uomori teaches controlling the transmission time (see 0065 and 0117); however, does not specifically teach evaluating the received light based on transmission time. Susumu teaches a similar rangefinder including using the TOF principle to detect the position and range of the target (see Abstract). It would have been obvious to modify Uomori to further include using the TOF in the evaluation system to confirm the detected results. Further, since Uomori already teaches controlling the transmission time, the system is capable of measuring the TOF without changing the system.

Referring to claim 17, wherein the light sources are at different distances from each other (see figures 2a-c, and 3c).

Referring to claim 18, wherein the light sources are situated on column-shaped subassemblies. (Figure 2)

Referring to claim 19, wherein the light sources are mounted as individual components on a printed circuit board (see figures 3A-C, paragraph [0067]). Even if Uomori did not teach mounting the light sources on a printed circuit board; it would have been very obvious to do to minimize the size of the system and for the efficient wiring of the circuit board.

Referring to claim 20, wherein the individual light sources are staggered in zigzag fashion, in each case within one column (fig. 2c, [0056])

Referring to claim 21, wherein the light sources are controllable independently of one another (see Abstract).

Referring to claims 22-23, wherein the light sources include light-emitting diodes [0055].

Referring to claim 24, further comprising a collective lens situated in front of each light source.

Referring to claim 28, wherein the means for receiving includes an optical receiver having a collective lens and a light-sensitive area for receiving the beams reflected by the objects [0075].

Referring to claim 29, wherein the light-sensitive area includes an optoelectric receiver [0075].

Referring to claim 30, wherein the light-sensitive area includes optoelectric receivers situated in a matrix configuration ("CCD" [0075]).

Referring to claim 25-27, Uomori does not mention having collective lens, waveguides, or the specific cross-section. However, all these are very well known given the system of Uomori to generate the desired illumination pattern. it would have been obvious to include any type of optical lens or to have any specific cross-section to generate the desired illumination pattern that is best for generating the 3D range image.

Response to Arguments

Applicant's arguments filed September 10, 2008 have been fully considered but they are not persuasive. Regarding claim 16, applicant argues that "The cited abstract of Uomori, therefore, clearly does not teach a means for receiving light beams reflected by objects, let alone any means for evaluating the received light beams". In Response: Uomori clearly teaches a rangefinder that transmits light at a target and detect/receive the reflected light (see paragraph 0016). Regarding claim 17, applicant argues that the light sources are not at different distances from each other. In response, Figure 3C clearly shows different distance between the light sources, comparing the first two LEDs from the right to the first two LEDs from the left. Regarding claim 19, applicant argues that the light sources are not mounted on a circuit board. In response, this is clearly inherent in Uomori system (see figures 3A-C). Therefore, the rejections are maintained.

Conclusion

Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on November 4, 2008 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ISAM ALSOMIRI whose telephone number is (571)272-6970. The examiner can normally be reached on Monday-Friday 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on 571-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

Art Unit: 3662

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

December 22, 2008

/Isam Alsomiri/
Primary Examiner, Art Unit 3662